

(No Model.)

2 Sheets—Sheet 1.

R. S. PEIRCE.
TOY ADVERTISING DEVICE.

No. 580,713.

Patented Apr. 13, 1897.

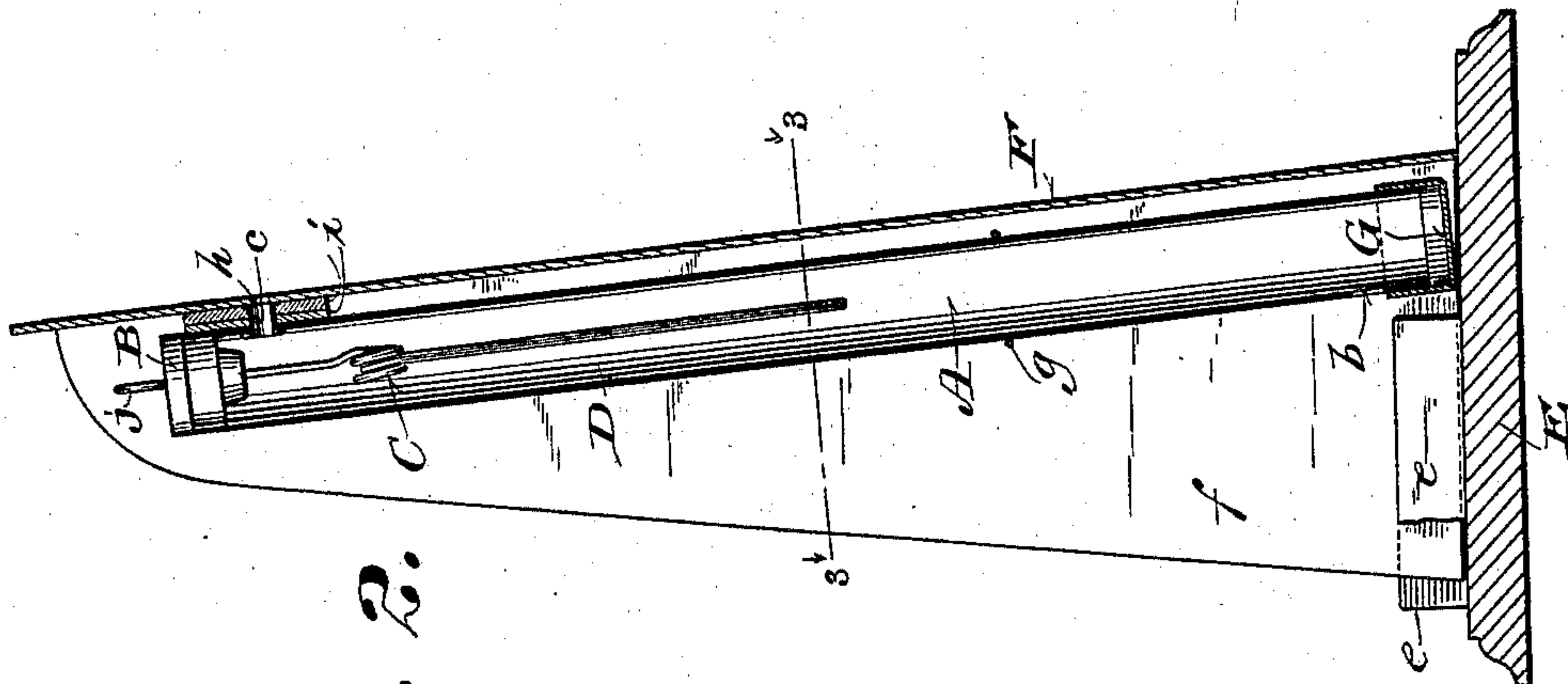


Fig. 2.

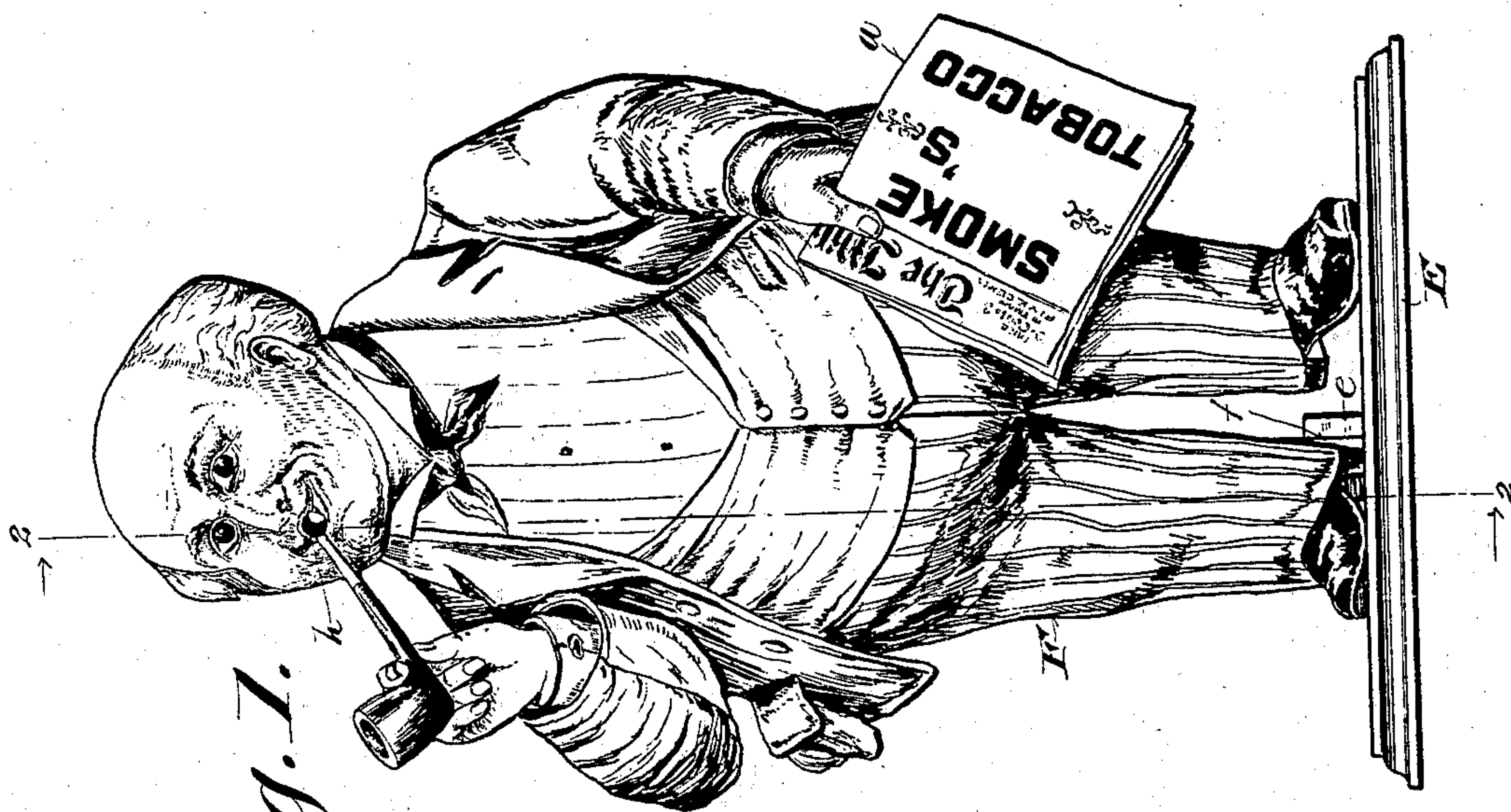


Fig. 1.

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By H. G. Underwood
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2 Sheets—Sheet 2.

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Fig. 6.

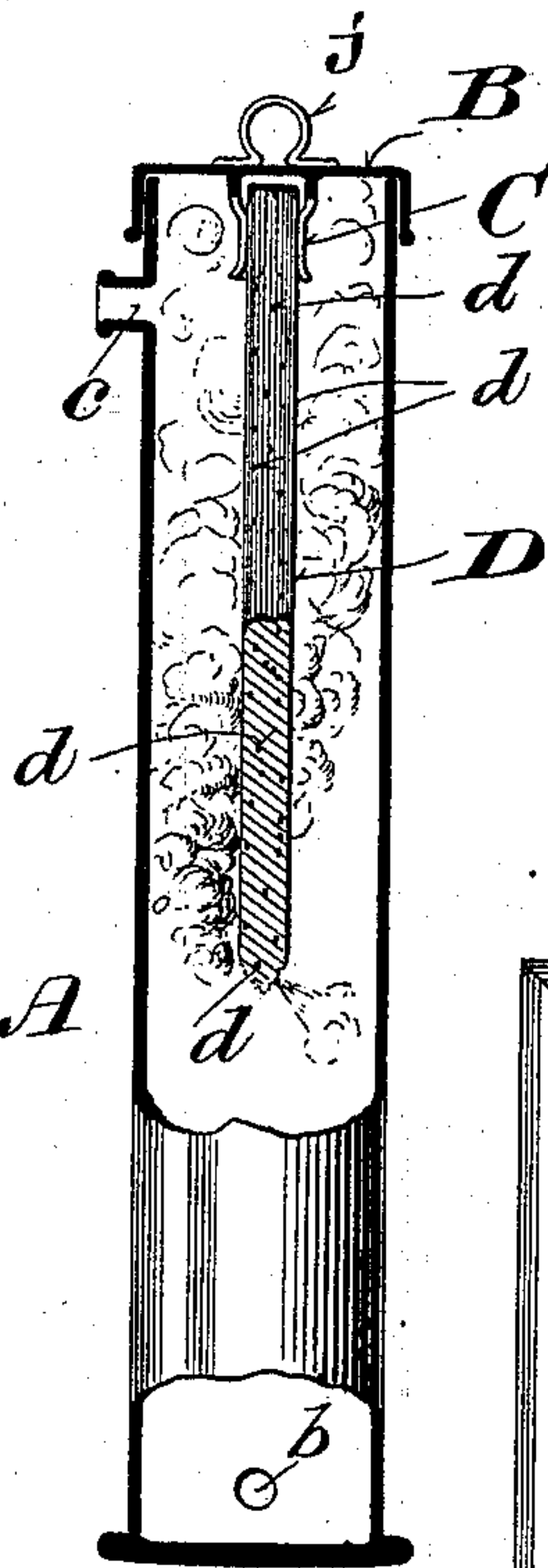


Fig. 4.

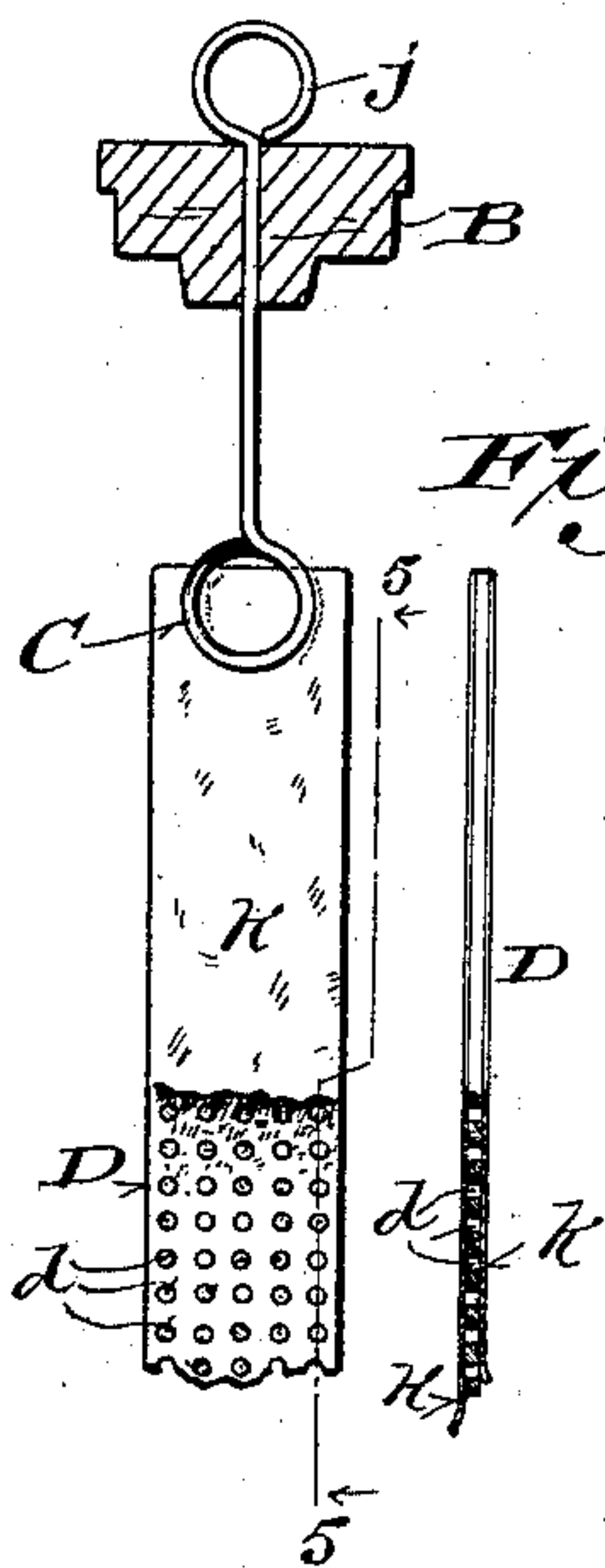
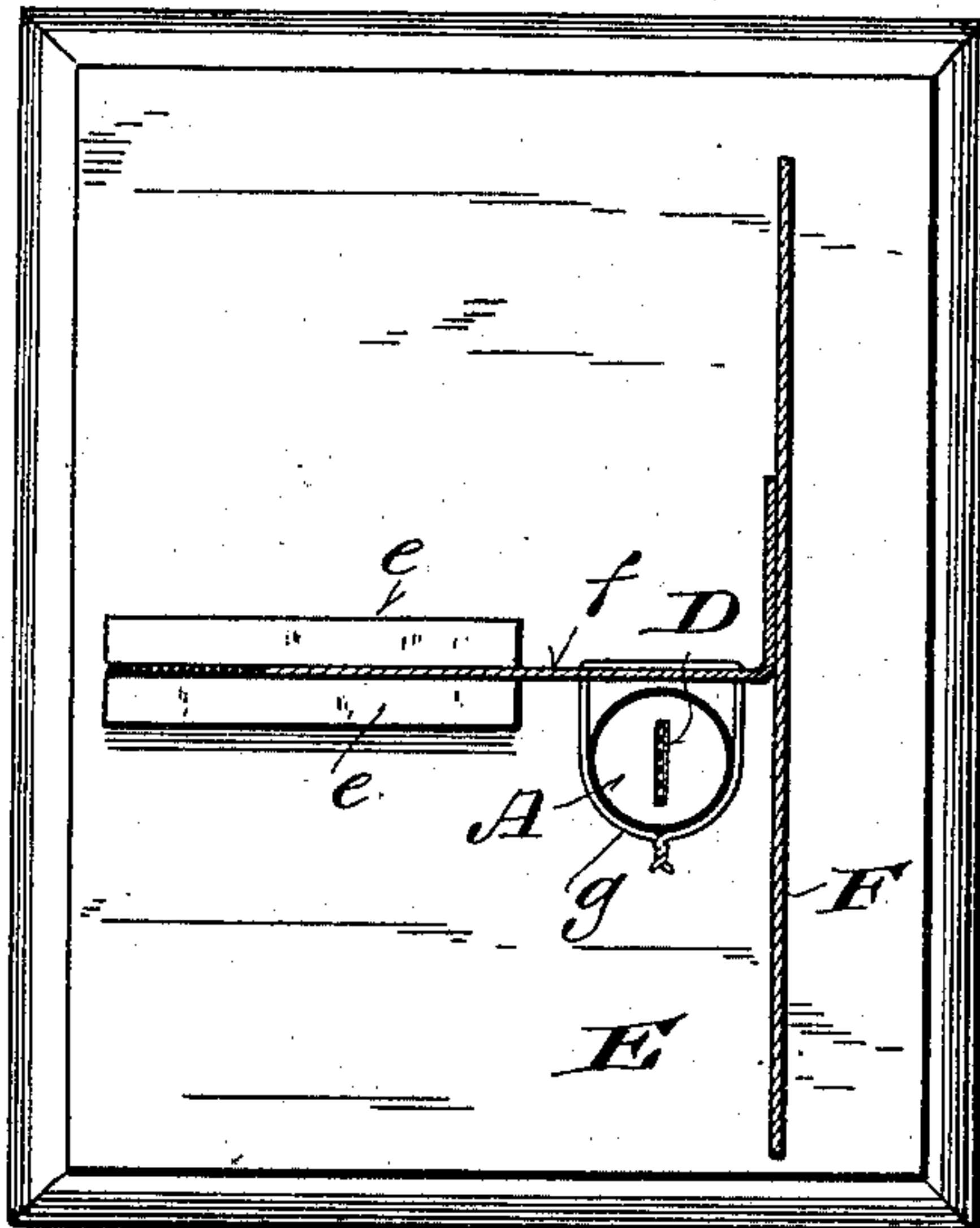


Fig. 5.

A

Fig. 3.



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UNITED STATES PATENT OFFICE.

RALPH S. PEIRCE, OF WAUKESHA, WISCONSIN, ASSIGNOR OF ONE-HALF TO
HAROLD G. UNDERWOOD, OF MILWAUKEE, WISCONSIN.

TOY ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 580,713, dated April 13, 1897.

Application filed September 28, 1895. Serial No. 564,051. (No model.)

To all whom it may concern:

Be it known that I, RALPH S. PEIRCE, a citizen of the United States, and a resident of Waukesha, in the county of Waukesha and
5 in the State of Wisconsin, have invented certain new and useful Improvements in Toys, Advertising Devices, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 My invention relates to that class of toys used principally as advertising devices that embody means for the production and emission of smoke, preferably in the form of smoke-rings; and my said invention consists, primarily, of a suitable casing properly supported
15 and a slow-burning intermittingly-explosive material contained in said casing, and, further, in certain details of construction and combinations of parts in said fuse, casing, and device, all as fully set forth hereinafter with reference to the accompanying drawings, and
20 subsequently claimed.

In the drawings, Figure 1 is a perspective view of an advertising smoke-toy embodying
25 one form of my invention. Fig. 2 is a vertical sectional view of the same on the line 2 2 of Fig. 1. Fig. 3 is a horizontal sectional view of the same on the line 3 3 of Fig. 2. Fig. 4 is a detail view, on an enlarged scale, of a portion
30 of the fuse and holder shown in the preceding figures. Fig. 5 is a detail sectional view on the line 5 5 of Fig. 4. Fig. 6 is a side elevation, partly in section, of a casing, holder, and fuse embodying another form of my said
35 invention.

Referring by letter to the said drawings, A represents a casing preferably formed of sheet metal and of cylindrical or other suitable contour, said casing being provided with an air-
40 inlet *b* and smoke-outlet *c* of such area as may be found convenient or desirable.

B represents a cap, head, or closure for the upper end of said casing A, which may be either a plug, as shown in Figs. 2 and 4, designed to partially fit within the open upper
45 end of the casing A, or which may be simply an exterior cap, as shown in Fig. 6, and in either case the said part B is provided with suitable means for holding and supporting a
50 fuse, as hereinafter described.

The form of device illustrated in the first

five figures of the drawings will be first specifically described, together with the support and attachments therein illustrated.

E represents a suitable base, and F a figure
55 suitably supported thereon. In the illustration given, representing one of the simplest forms of said device, this figure F is a picture-card on the front surface of which is delineated a man in the act of smoking a pipe, said
60 card being preferably cut out to conform to the outlines of said figure. One hand of this figure is shown holding the representation of a newspaper *a*, on which is displayed an advertisement.
65

Any suitable means of supporting the figure may be employed, that illustrated embodying strips or guides *e e*, of any suitable material, such as wood, secured to the upper surface of
70 the base E at a slight distance apart to receive between them the lower edge of a cardboard or other stay-piece *f*, one of whose vertical or upright edges is preferably bent and cemented or otherwise secured to the rear
75 surface of the picture-card F. The casing A is shown in these figures attached to this stay-piece *f*, as by wire loops *g*, and the described smoke-outlet *c* of said casing coincides with
80 an orifice *h* in the mouth of the figure on the picture-card F, the casing being preferably secured at this point to the picture-card F with
85 suitable strips or washers *i*, of cardboard or other flexible material, to insure the permanency of this coincidence of the openings *c h*, these strips being perforated to receive the
90 walls of the outlet *c* and preferably cemented to the part F.

In the form of casing shown best in Fig. 2 the bottom of the casing is open and a movable cap or head G fitted thereon of such length
95 as to enable the air-inlet *b* to be partially closed at will, thus regulating the draft as necessary or desirable in any particular instance.

In the form shown in Fig. 6 the casing A
95 has simply a closed bottom.

Depending from the inner or under side of the upper cap, head, or closure B is a clamp or fuse-holder C of any suitable construction, that as shown in detail in Figs. 2 and 4 being
100 simply a wire passed through the head B and with its lower end formed into close flat coils designed to hold the flat fuse D shown in the

same figures, while in Fig. 6, wherein a metal cap B is shown, the clamp C consists of a series of spring-fingers depending from said cap, to which they are preferably soldered.

5 In this form a suitable separate handle *j* may be soldered or otherwise secured to the top of the cap B, while in the form first described this handle *j* may be conveniently made by a
10 wire of which the clamp C is formed.

The fuse D shown in detail in Figs. 4 and 5 is a flat fuse, and that shown in Fig. 6 is a round fuse, but in both instances it is a slow-burning fuse containing explosive material,
15 such as grains *d* of gunpowder, arranged at intervals of its length. The flat fuse is preferably made by perforating the material, such as chemically-prepared cardboard, of which the fuse is made, and inserting the explosive
20 material in said perforations and covering both sides of said fuse with thin paper *k k*.

From the foregoing it will be understood that in practice the fuse or equivalent is necessarily intermittently explosive, and as one
25 form of slow-burning intermittently-explosive material I may employ punk studded with grains of gunpowder.

The slow-burning intermittently-explosive material being ignited and placed in the casing, combustion is supported by air in circulation through the inlet and outlet of said casing. Smoke resulting from combustion of the
30 aforesaid material will escape through the outlet of the casing in a slow stream, except when an explosion takes place, and then, owing to a sudden disturbance of air in said casing and the expansion of gases resulting from said explosion, the smoke will take the form of a ring
35 as it passes out of the aforesaid casing.

40 The smoke-rings may be regular or irregular in their formation accordingly as the explosive substance in the slow-burning material is arranged, the intervals between rings being also predetermined.

45 In the picture-card F shown the man there delineated is represented smoking a pipe. In place of this a cigar or cigarette may be shown, and, if desired, an imitation of any of these articles may be employed with an opening there-
50 through communicating with the casing, so that smoke may escape from the said imitation pipe, cigar, or cigarette. In addition to the described ring or puff of smoke escaping through the outlet *c* and orifice *h*, and in place
55 of a pictorial representation of a smoker on a

flat card, it is obvious that a statue-like device may be substituted and that the smoke producing and discharging apparatus may be employed without the figure of the smoker or in connection with a representation of any ani- 60
mate or inanimate object, either as a toy, advertising medium, or for such other purpose as may be found desirable.

Having thus described my invention, what I claim as new, and desire to secure by Letters 65
Patent, is—

1. A casing provided with an inlet and outlet, and a slow-burning smoke-producing fuse having an explosive material incorporated in grains throughout the body of said fuse, at in- 70
tervals, and suspended in said casing.

2. A casing having an inlet and outlet, a detachable head for the casing, a clamp upon the inside of the head, and a fuse of slow-burning smoke-producing material, having 75
an explosive material incorporated in grains throughout the body of said fuse at intervals, and held by the clamp.

3. In a smoke toy, a slow-burning fuse provided with explosive material incorporated in grains throughout the body of said fuse at in- 80
tervals for causing intermittent explosions at predetermined times.

4. A smoke toy, comprising a suitable figure or support, a casing secured thereto and 85
provided with an air-inlet and smoke-outlet and a head or cap for said casing carrying a slow-burning smoke-producing fuse, having an explosive material incorporated in grains throughout the body of said fuse at intervals. 90

5. A smoke toy, comprising a suitable figure or support, provided with space for the reception or display of an advertisement, a casing secured to said figure or support and provided with an air-inlet and smoke-outlet, and 95
a head or cap for said casing provided with a suitable clamp on its under surface, and a slow-burning smoke-producing fuse, held by said clamp, and having an explosive material incorporated in grains throughout the body 100
of said fuse at intervals.

In testimony that I claim the foregoing I have hereunto set my hand, at Waukesha, in the county of Waukesha and State of Wisconsin, in the presence of two witnesses.

RALPH S. PEIRCE.

Witnesses:

D. NEWHALL,
R. B. NEWHALL.